

## ABSTRACT

This invention provides a method of acquisition of binary information that has been stored physically in a periodic storage medium. The method, referred to as matrix-method deconvolution (MMD), is useful for use with optical storage media using an optical addressing system that reads and writes binary information in a periodic array of nano-particles. With this MMD method, the density of existing memory systems can be boosted to between 10 and 100 Terabytes of data per cubic centimeter. This matrix-method deconvolution method compensates for the effects of the optical addressing system's point spread function. Prior knowledge of a system's point spread function and inter memory-center spacing is used.